STATE OF CALIFORNIA
SAFETY ASSESSMENT PROGRAM
RESERVOIR

Facility Name _____

Address _____

Co-City-Vic _____

Mo/Day/Yr _____/_____/_____ Time _____
use 24 hr.

Type of Disaster _____

SAP ID Nos. _____ _____

Other Reports _____

No. Photos _____ No. Sketches _____

Ref. Dwgs. _____

Est. Damage %_____

Facility Status

SAFETY INSTRUCTIONS: The possibility of toxic gases in confined spaces or of fuel leaks should be recognized as a potential hazard.

CAUTION: The primary purpose of the report is to advise of the condition of the facility for immediate continued use/occupancy. REINSPECTION OF THE FACILITY IS RECOMMENDED. AFTERSHOCKS MAY CAUSE DAMAGE THAT REQUIRES REINSPECTION. The conclusions reached by engineers who re-examine the facility later should take precedence. The assessment team will not render further advice in the event of conflict of engineering recommendations.

A. CONDITION:

Existing: None O Green O Yellow O Red O

Recommended: Green O Yellow O Red O

Posted at this assessment: Yes O No O

B. RECOMMENDATIONS

Monitor_____ O

Remove from service_____ O

Continue in service_____ O

Continue in service, repair ASAP_____ O

Drain and repair_____ O

Lower water level and continue service____ O
_____ ft

_____

_____

_____

_____

_____

_____

C. COMMENTS _____

_____

_____

_____

_____

STEEL RESERVOIR

D. RESERVOIR DESCRIPTION

Capacity _____ MG Wall Height _____ ft O/S Diameter _____ ft

Roof Type O Wood O Steel O Flat O Conical O Knuckled Edge

Shell O Welded O Bolted O Riveted

Floor support O Footing ring O Oiled sand O A.C. O Other _____

Footing O Concrete ring O Other _____ O None

Pipe connection O Rigid O Flexible

Anchorage to foundation _____ Dia. _____ Spacing

DAMAGE OBSERVED (D.O.)

Damage Scale:	0 None (0%)	1 Slight (1-10%)	2-3-4 Moderate (11 - 40%)	5 Severe (41 - 60%)	6 Total (over 60%)	NA Not Applicable	NO Not Observed

E. SHELL

D.O.

_____ Elephant's foot

a. Height _____ ft

b. Circumferential extent _____ft

_____ Other buckling

_____ Horizontal joints broken

_____ Vertical joints broken

_____ Plate split

_____ Seismic anchors

_____ Rocking of reservoir evidenced

_____ Sliding of reservoir evidenced

_____ Leaks evident. Rate _____ gpm

_____ Unexplained wet spots on adjacent ground

_____ Shell penetrations damaged

_____ Other attachments to shell damaged

_____ Pipe Connections to Tank

F. VALVE PIT

D.O.

_____ Access

_____ Control Piping

_____ Gauges

_____ Hatches

_____ Inlet-outlet piping

_____ Pit flooded

_____ Roof

_____ Walls

_____ Charts

_____ Valving

G. _____ Roof

H. _____ Footing

I. _____ Floor

J. _____ Aboveground Piping

K. _____ Underground Piping

L. REMARKS _____

_____

_____

_____

_____

PRESTRESSED CONCRETE RESERVOIR

M. RESERVOIR DESCRIPTION:

Wire or Strand Wrapped	Buttress Type using individual Tendons, usually inside wall	Bar Tendons on Tank Surface
TENDONS:		
O 220 ksi - 0.142" or 0.172" dia	O Strands O Wires O Bars	O Bars with prop. couplers
O 270 ksi - 3/8" dia		
WALL CONSTRUCTION:		
O Cast-in-place	O Cast-in-place	O Cast-in-place
O Shotcrete	O Precast	O Shotcrete
O Shotcrete w/ steel diaphragm		
O Precast		
O Precast w/ steel diaphragm		

TENDON PROTECTION SYSTEMS:

O Shotcrete O Corrosion inhibiting grease O Galvanizing protected by
O Grout plastic sheath

Tank Restraints O Seismic cables O Curb (restraining sliding)
Capacity _____ MG Wall height _____ ft O/S diameter _____ ft

Roof Type: O Flat O Dome Exposed O Fill depth _____ Surface usage _____
O Yes O No

DAMAGE OBSERVED (D.O.)

	0	1	2-3-4	5	6	NA	NO
Damage Scale:	None (0%)	Slight (1-10%)	Moderate (11 - 40%)	Severe (41 - 60%)	Total (over 60%)	Not Applicable	Not Observed

N. SHELL

D.O.

_____ Shell or shotcrete cracked
_____ Vertical cracks more than 2 feet long
_____ Unexplained excessive loss of contents
_____ Bulging observable
_____ Visible construction joints
_____ Wall leaking
_____ Wet spots
_____ Spouts
_____ Horizontal cracks more than 25% of perimeter
_____ Corrosion at horizontal cracks
_____ Shotcrete delaminated at cracks
_____ Attachments to shell loose
_____ Leaks @ rust stains
_____ Major leaks at shell/foundation joint
_____ Unexplained wet spots on adjacent ground
_____ Corrosion at manholes/other penetrations

Leakage rate _____ gpm

O. HORIZONTAL PRESTRESSING

D.O.

1. Wrapping:
   - _____ Corrosion
   - _____ Corrosion at horizontal cracks
2. Individual tendons:
   - _____ Corrosion products
   - _____ Leaks @ tendon locations
   - _____ Leaks @ tendon anchorages
   - _____ Tendon anchorage distressed
   - _____ Tendon anchorage disrupted/loose
   - _____ Cracking in vicinity of tendon anchorage
   - _____ Tendon location visually observable
   - _____ Discoloration of concrete in line w/tendons
3. Bar tendons on surface:
   - _____ Tendons failed
   - _____ Tendons sound loose

_____ Evidence of rust

DAMAGE OBSERVED (D.O.)

	0	1	2-3-4	5	6	NA	NO
Damage Scale:	None (0%)	Slight (1-10%)	Moderate (11 - 40%)	Severe (41 - 60%)	Total (over 60%)	Not Applicable	Not Observed

P. ROOF D.O.

Flat or conical
_____ Displaced with respect to wall
_____ Sagging
_____ Cracked at edges
_____ Cracked at interior supports
_____ Supporting column spalled

Dome Shell
O Shotcrete O CIP concrete
O Precast concrete
_____ Construction joints
_____ Cracks
O Show reinforcement/corrosion
O Increasing with time
_____ Delaminating
_____ Misalignment of surface
_____ Rust lines @ top of soffit over rebars
_____ Dome Ring
_____ Corrosion
_____ Distress @ shell/ring juncture
_____ Shotcrete loose/hollow-sounding
_____ Vertical cracks
_____ Wire (strand) exposed/corroded

D.O.

Q. _____ FOOTING

R. _____ FLOOR

S. _____ ABOVEGROUND PIPING

T. VALVE PIT

_____ Access
_____ Control piping
_____ Gauges
_____ Hatches (equipment)
_____ Inlet-outlet piping
_____ Pit flooded (depth _____ ft)
_____ Roof
_____ Walls
_____ Charts
_____ Valving

U. REMARKS _____

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